

WHAT IS CLAIMED IS:

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1. A transmission device which cross connects channels on a synchronous multiplex transmission network which forms a ring, and which performs restoration of communication by looping back signals in a protection path when a failure occurs, said transmission device comprising:

10 a memory area which stores information for determining whether an alarm indication signal needs to be inserted in a channel or not, wherein the size of said memory area corresponds to the number of channels targeted for said restoration; and

15 a part which inserts said alarm indication signal in a channel by switching results of said determination according to predetermined information.

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2. The transmission device as claimed in claim 1, wherein said predetermined information is information for cross connection.

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3. A transmission device which includes a part for switching and recovering a path by selecting either of two path signals on a synchronous multiplex transmission network which forms a ring, wherein said transmission device switches and recovers a path without skipping an event which arises between polling accesses by a CPU

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of said transmission device.

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4. A transmission device which includes a part for switching and recovering a path by selecting either of two path signals on a synchronous multiplex transmission network which
10 forms a ring, said transmission device comprising:
a switching part which switches a path when an alarm arises in said path;
a storing part which stores alarm information of every alarm arising and disappearing
15 in a path;
a starting part which resets a timer and starts path monitoring by reading said alarm information; and
a recovering part which recovers a
20 switched path after a predetermined period of path monitoring.

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5. A transmission device which performs cross connection on a synchronous multiplex transmission network, said transmission device comprising:
30 a part, provided in each interface part, which performs phase adjusting of channel signals.

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6. A transmission device which performs cross connection on a synchronous multiplex

transmission network, said transmission device comprising:

5 a distributing part, provided in each interface part, which distributes a reference timing pulse;

10 a phase adjusting part, provided in said each interface part, which performs phase adjusting of channel signals by performing clock change for said reference timing pulse.

15 7. The transmission device as claimed in claim 6, wherein said phase adjusting part generates clock change timing by using a timer.

20 8. The transmission device as claimed in claim 6, wherein said phase adjusting part generates clock change timing by using PLL lock detection.

25 9. The transmission device as claimed in claim 6, wherein said phase adjusting part comprises:

30 a window generating part which generates a narrow window and a wide window for monitoring phase of clock change timing; and

35 a timing generating part which generates clock change timing by monitoring said clock change timing with said narrow window during a monitoring period and by switching said narrow window to said

wide window if a predetermined condition is
satisfied.

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